

FIG. 1A

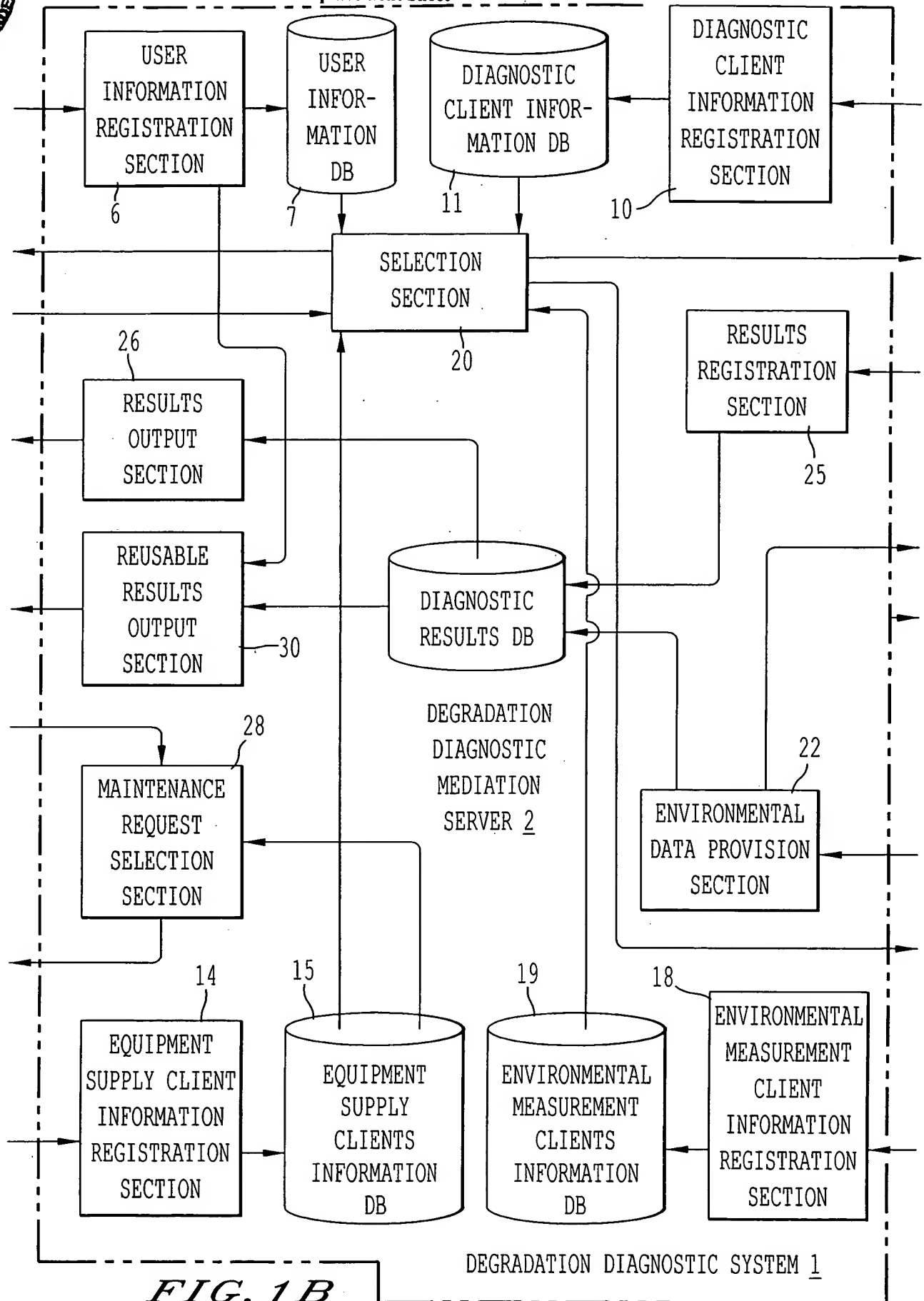
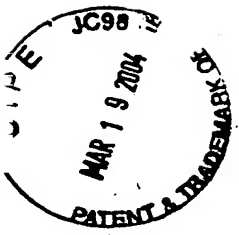


FIG. 1B

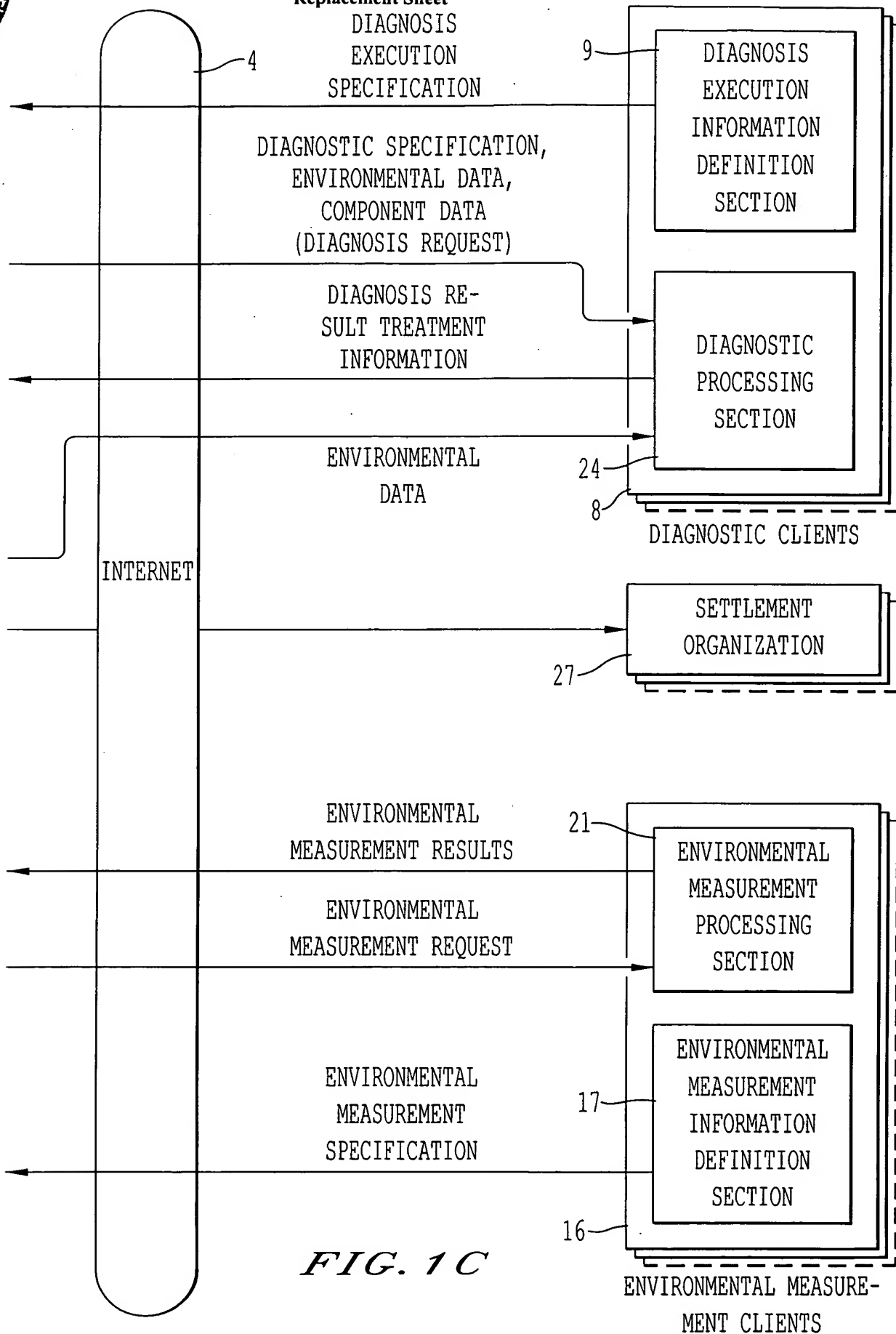
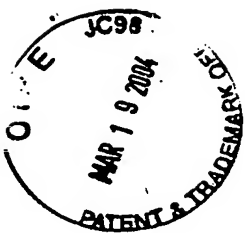
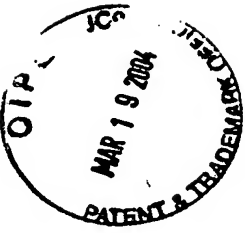
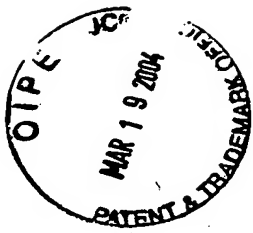


FIG. 1C



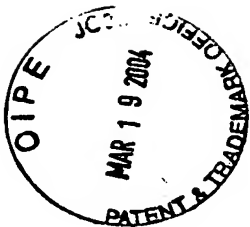
	DESIRED DIAGNOSIS FEE	EQUIPMENT DESIRED TO BE DIAGNOSED	PRECISION OF DIAGNOSIS	AIR TEMPERATURE	HUMIDITY	CONCENTRATION OF CHLORINE GAS	--
USER a1	300,000 yen	CONTROL PANEL	DEGRADATION DIAGNOSIS	30	80	0.03 ppm	--
USER a2	500,000 yen	CIRCUIT BOARD	DEGRADATION DIAGNOSIS	20	60	0.08 ppm	--
USER a3	1,000,000 yen	LOGIC IC	LIFE DIAGNOSIS	20	60	0.07 ppm	--
USER a4	200,000 yen	RELAY BOARD	DEGRADATION DIAGNOSIS	15	NOT KNOWN	NOT KNOWN	--
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

FIG. 2



	DIAGNOSTIC FEE	EQUIPMENT TO BE DIAGNOSED	PRECISION OF DIAGNOSIS	ENVIRONMENTAL DATA REQUIRED	EQUIPMENT INFORMATION REQUIRED	--
DIAGNOSTIC SERVICE PROVIDER b1	500,000 yen	CONTROL DEVICE	LIFE DIAGNOSIS	AIR TEMPERATURE, CONCENTRATION OF CHLORINE...	DATE OF INSTALLATION...	--
DIAGNOSTIC SERVICE PROVIDER b2	3,000,000 yen	EWS	DEGRADATION DIAGNOSIS	AIR TEMPERATURE, AMOUNT OF DUST...	...	--
DIAGNOSTIC SERVICE PROVIDER b3	1,000,000 yen	ORDINARY IC	LIFE DIAGNOSIS	HUMIDITY...	DATE OF MANU- FACTURE OF THE IC, TYPE OF SEALING FILM	--
DIAGNOSTIC SERVICE PROVIDER b4	100,000 yen	CIRCUIT BOARD	DEGRADATION DIAGNOSIS	HUMIDITY, CHLORINE CONCENTRATION...	WIDTH OF WIRING, TYPE OF RESIST	--
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

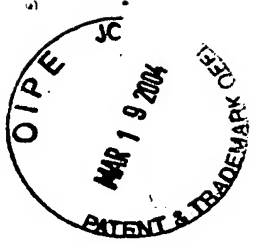
FIG. 3



OBLON, SPIVAK, ET AL.  
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Inventor: Keiichi SASAKI, et al.  
Serial No. 10/032,070  
Reply to NOA dated: December 23, 2003  
Replacement Sheet

	EXAMINATION FEE	ENVIRONMENTAL DATA CAPABLE OF BEING EXAMINED	--
ENVIRONMENTAL MEASURER c1	50,000 yen	AIR TEMPERATURE, HUMIDITY	--
ENVIRONMENTAL MEASURER c2	300,000 yen	AMOUNT OF DUST	--
ENVIRONMENTAL MEASURER c3	100,000 yen	CONCENTRATION OF VARIOUS GASES; ONE TYPE	--
ENVIRONMENTAL MEASURER c4	100,000 YEN	AIR TEMPERATURE, HUMIDITY, AMOUNT OF WIND	--
-	-	-	-
-	-	-	-
-	-	-	-

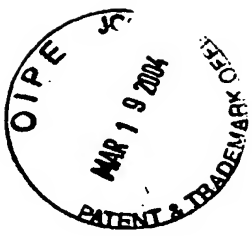
FIG. 4



OBLON, SPIVAK, ET AL.  
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Inventor: Keiichi SASAKI, et al.  
Serial No. 10/032,070  
Reply to NOA dated: December 23, 2003  
Replacement Sheet

	TYPE OF EQUIPMENT	VARIOUS RATINGS	--
EQUIPMENT SUPPLIER d1	LOGIC IC	COPPER WIRING, WIRING WIDTH 15 micron...	--
EQUIPMENT SUPPLIER d2	CIRCUIT BOARD	COPPER PATTERN, WIRING WIDTH 0.25mm, WIRING SEPARATION 0.5mm...	--
EQUIPMENT SUPPLIER d3	MY TYPE RELAY	METAL JOINT, CONTACT RESISTANCE 0.1mΩ, COIL: ENAMEL COATING...	--
EQUIPMENT SUPPLIER d4	CIRCUIT BOARD (BEFORE '94)	COPPER PATTERN, WIRING WIDTH 2mm, WIRING SEPARATION 2mm, NO RESIST FILM	--
-	-	-	--
-	-	-	--
-	-	-	--

FIG. 5

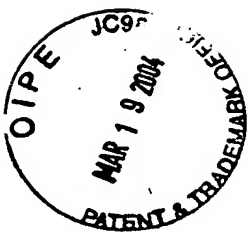


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Inventor: Keiichi SASAKI, et al.  
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	ENVIRONMENTAL DATA REQUIRED FOR DIAGNOSIS					DIAGNOSIS FEE
	A	B	C	D	E	
DIAGNOSTIC SERVICE PROVIDER b1	<input type="radio"/>	<input type="radio"/>				Fa
DIAGNOSTIC SERVICE PROVIDER b2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>			Fb
DIAGNOSTIC SERVICE PROVIDER b3	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		Fc
DIAGNOSTIC SERVICE PROVIDER b4	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Fd

FIG. 6

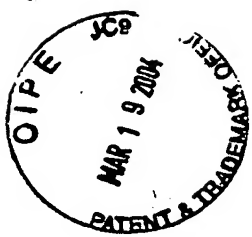




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	ENVIRONMENTAL DATA CAPABLE OF EXAMINATION					MEASUREMENT FEE
	A	B	C	D	E	
ENVIRONMENTAL MEASURER c1	○	○			○	F1
ENVIRONMENTAL MEASURER c2			○	○	○	F2
ENVIRONMENTAL MEASURER c3	○		○		○	F3
ENVIRONMENTAL MEASURER c4			○		○	F4
ENVIRONMENTAL MEASURER c5		○			○	F5

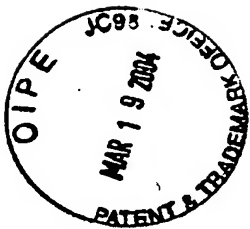
FIG. 7



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Inventor: Keiichi SASAKI, et al.  
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	DEFICIENT ENVIRON- MENTAL DATA	ENVIRONMENTAL MEASURERS CAPABLE OF EXAMINING THE DEFICIENT ENVIRONMENTAL DATA
DIAGNOSTIC SERVICE PROVIDER b1	B	c1, c5
DIAGNOSTIC SERVICE PROVIDER b2	B	c1, c5
DIAGNOSTIC SERVICE PROVIDER b3	D	c2
DIAGNOSTIC SERVICE PROVIDER b4	D, E	c2

FIG. 8



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DESIRED FEE: M

	DIAGNOSTIC SERVICE PROVIDER	ENVIRONMENTAL MEASURER	DIAGNOSIS FEE
CANDIDATE 1	b4	c2	Fd + F2 + m
CANDIDATE 2	b3	c2	Fc + F2 + m
CANDIDATE 3	b2	c5	Fb + F5 + m
CANDIDATE 4	b2	c1	Fb + F1 + m
CANDIDATE 5	b1	c5	Fa + F5 + m
CANDIDATE 6	b1	c1	OVER BUDGET

FIG. 9

E  
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 Inventor: Keiichi SASAKI, et al.  
 Serial No. 10/032,070  
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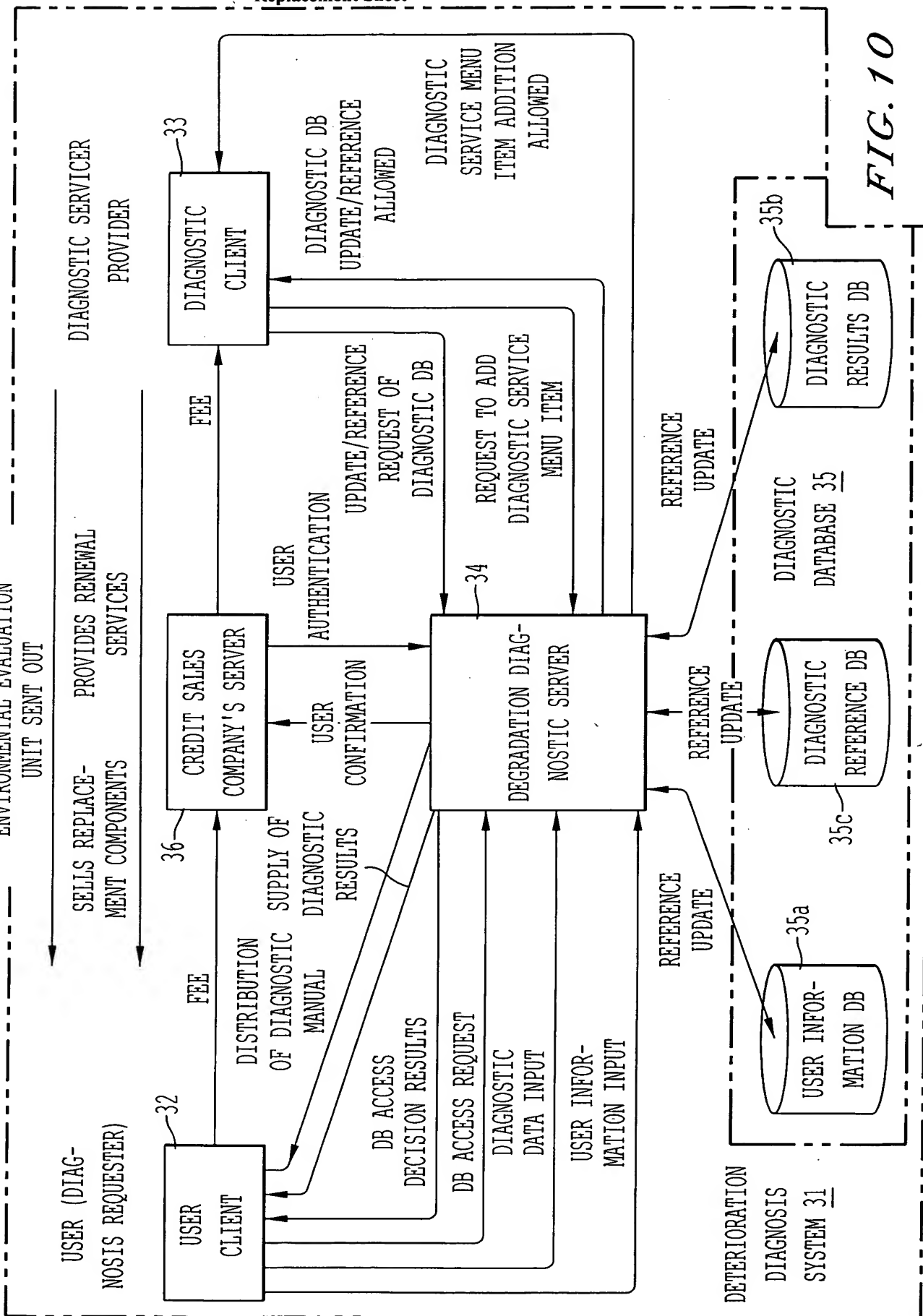


FIG. 10

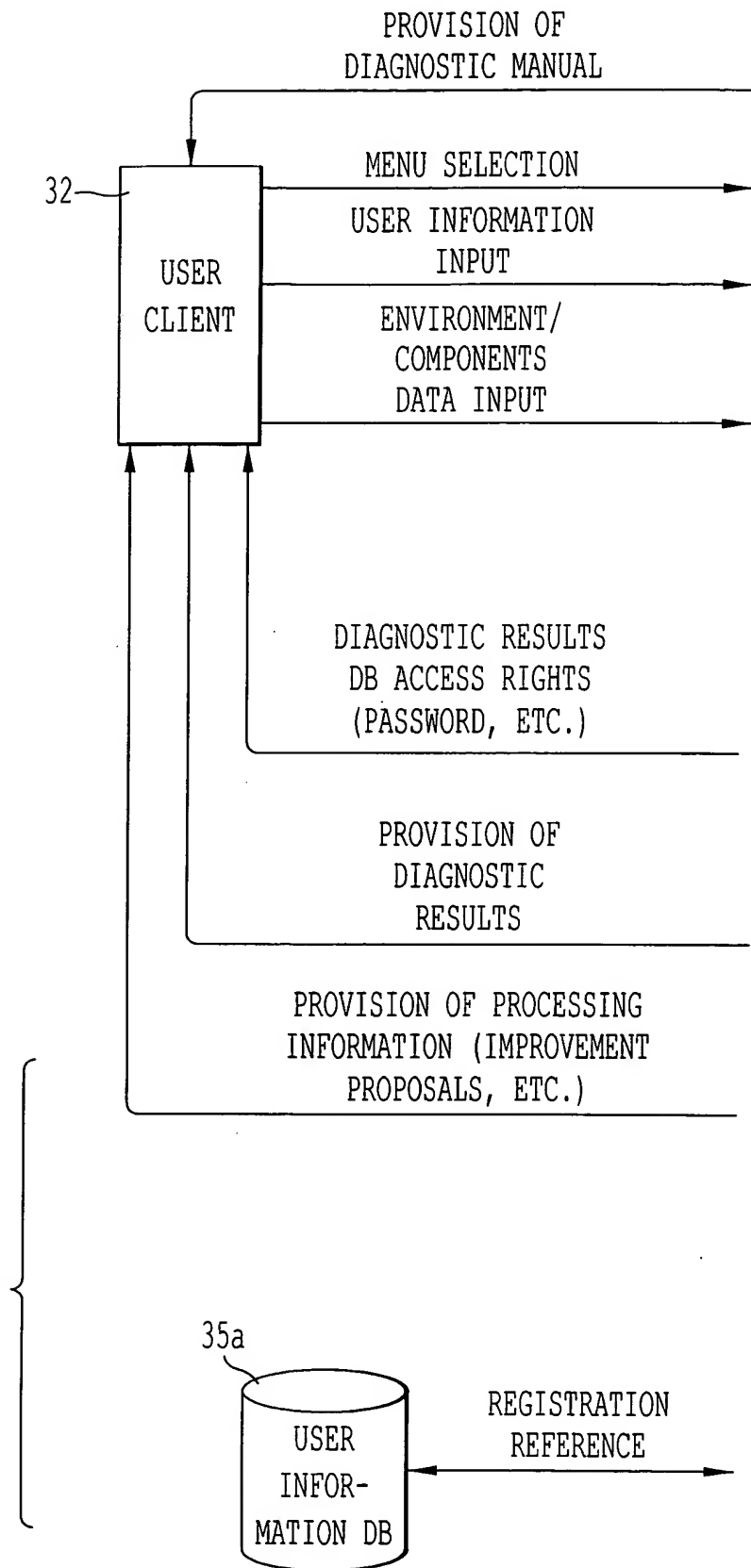
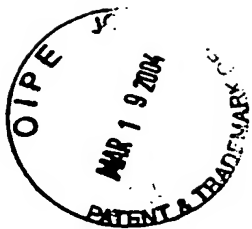
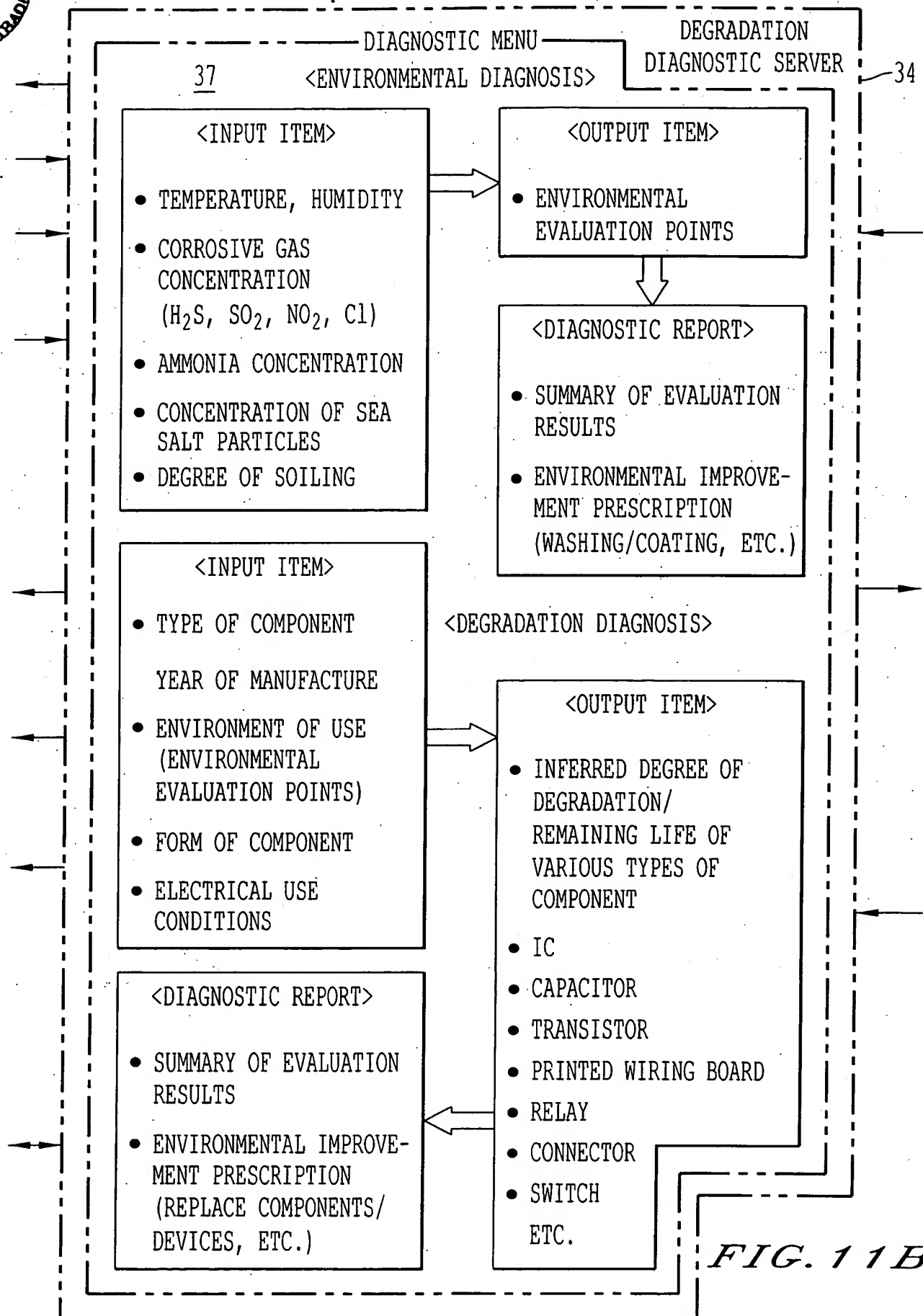
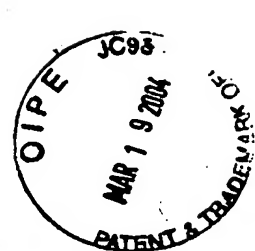
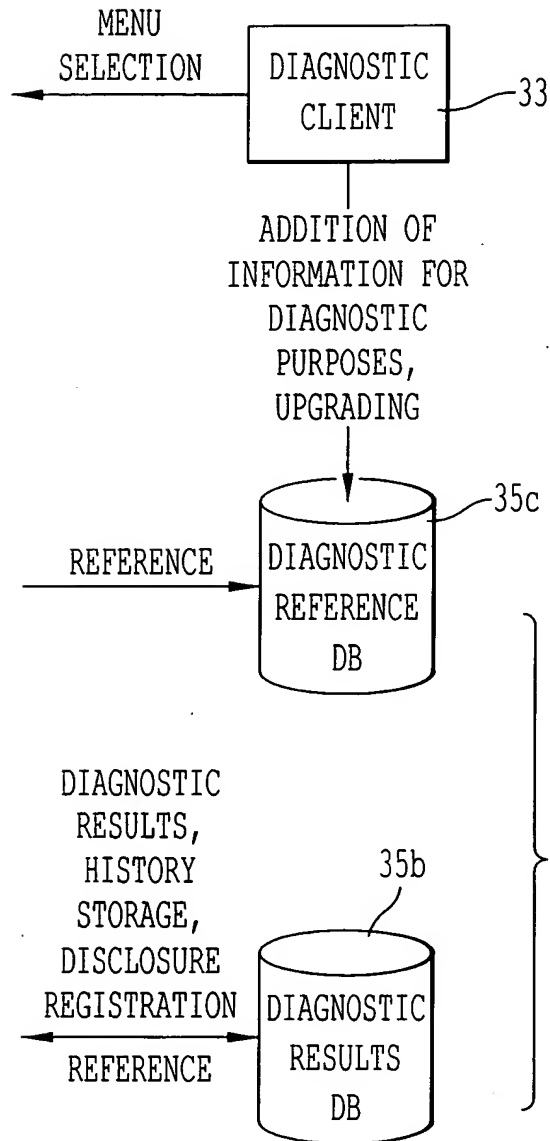
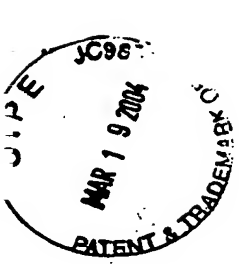


FIG. 11A





*FIG. 11C*

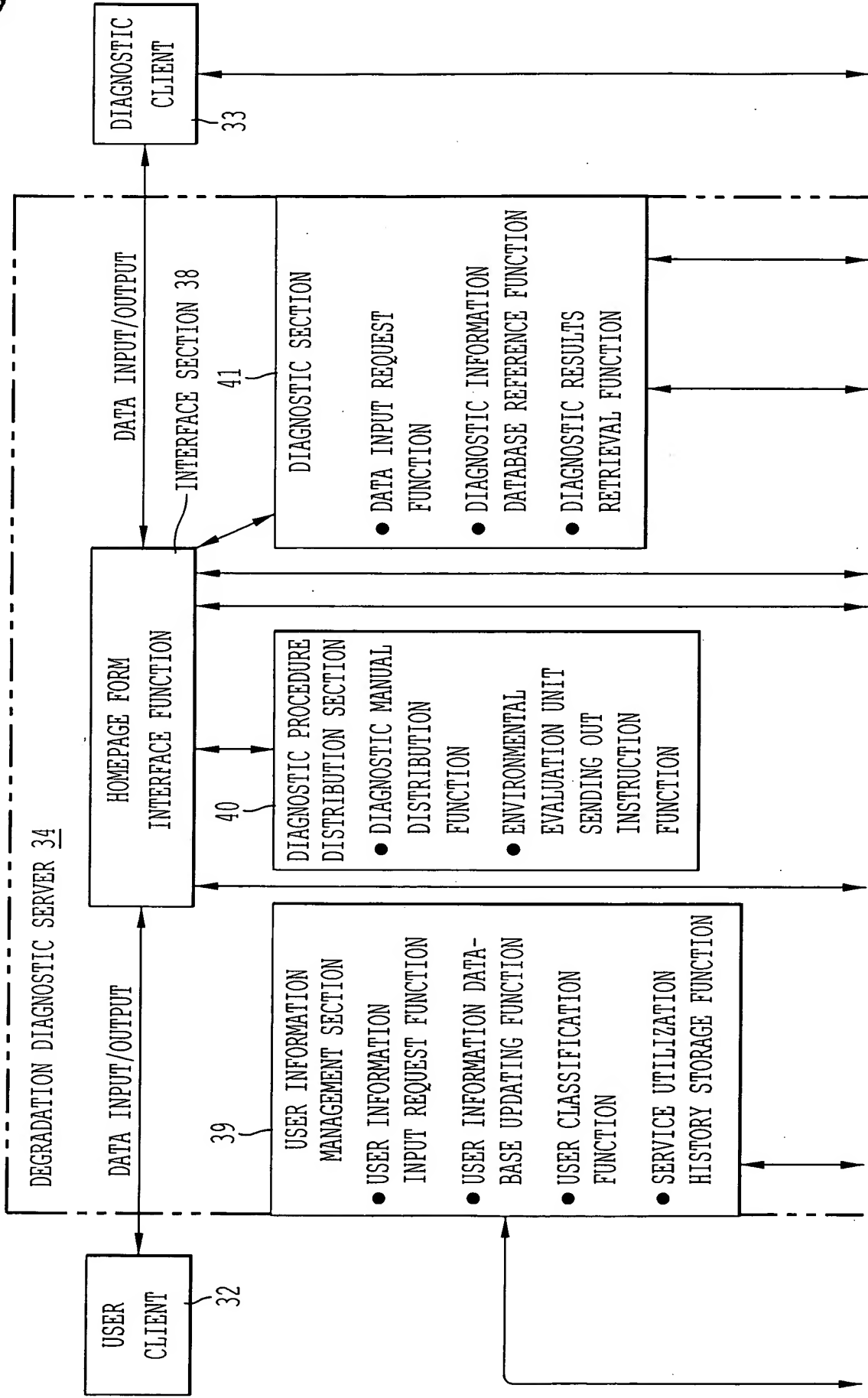
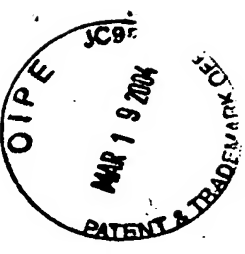


FIG. 12A



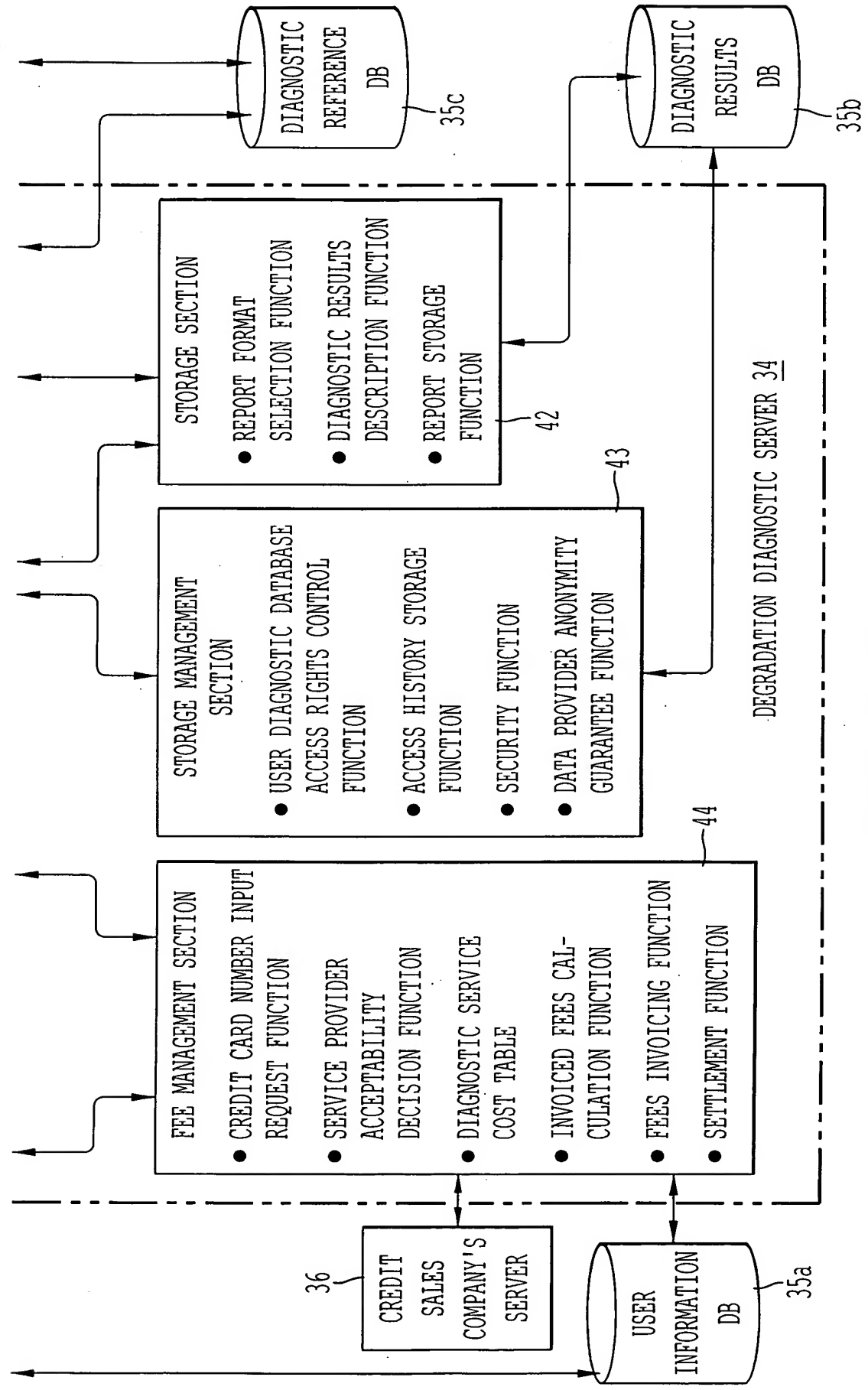
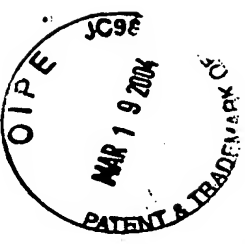
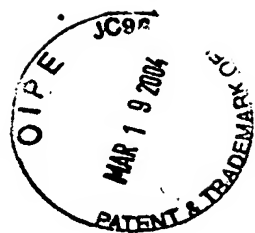
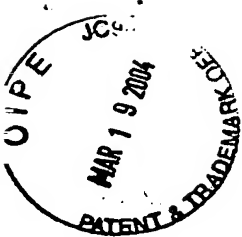


FIG. 12B



ENVIRONMENTAL FACTORS			RANGES			
			I	II	III	IV
TEMPERATURE (°C)	ANNUAL AVERAGE	A	20 OR LESS	20 < AND ≤ 50	25 < AND ≤ 30	MORE THAN 30
RELATIVE HUMIDITY (%)	RAINY SEASON AVERAGE	B	60 OR LESS	60 < AND ≤ 70	70 < AND ≤ 85	MORE THAN 85
	ANNUAL AVERAGE		50 OR LESS	50 < AND ≤ 60	60 < AND ≤ 75	MORE THAN 75
GAS (ppm)	SULPHUR DIOXIDE (SO <sub>2</sub> )	C1	0.04 OR LESS	0.04 < AND ≤ 0.08	0.08 < AND ≤ 0.2	0.2 < AND ≤ 5
	NITROGEN DIOXIDE (NO <sub>2</sub> )	C2	0.02 OR LESS	0.02 < AND ≤ 0.05	0.05 < AND ≤ 0.1	0.1 < AND ≤ 5
	HYDROGEN SULPHIDE (H <sub>2</sub> S)	C3	0.003 OR LESS	0.003 < AND ≤ 0.01	0.01 < AND ≤ 0.1	0.1 < AND ≤ 10
	CHLORINE GAS (Cl <sub>2</sub> )	C4	0.002 OR LESS	0.002 < AND ≤ 0.01	0.01 < AND ≤ 0.1	0.1 < AND ≤ 1
	AMMONIA GAS (NH <sub>3</sub> )	C5	0.1 OR LESS	0.1 < AND ≤ 1	1 < AND ≤ 10	10 < AND ≤ 100
DEGREE OF SOILING	EQUIVALENT SALT DEPOSITION RATE (mg/cm <sup>2</sup> /year)	D	0.03 OR LESS	0.03 < AND ≤ 0.06	0.06 < AND ≤ 0.12	MORE THAN 0.12
	DISTANCE FROM COAST (km)		MORE THAN 2	1 < AND ≤ 2	0.5 < AND ≤ 1	LESS THAN 0.5

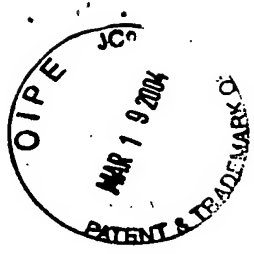
ENVIRONMENTAL  
RANGE TABLE 45  
FIG. 13



ENVIRONMENTAL FACTOR WEIGHTING TABLE 46

ENVIRONMENTAL FACTOR	RANGE			
	I	II	III	IV
A	1	2	4	8
B	1	8	16	24
C1	1	3	6	9
C2	1	3	6	9
C3	1	8	14	20
C4	1	10	20	30
C5	1	2	4	8
D	1	8	15	24

FIG. 14



PROCESS OF DERIVATION OF METAL CORROSION  
 WEIGHT LOSS AT A GIVEN TIME  $T = t_1 + t_2 + t_3 + t_4$

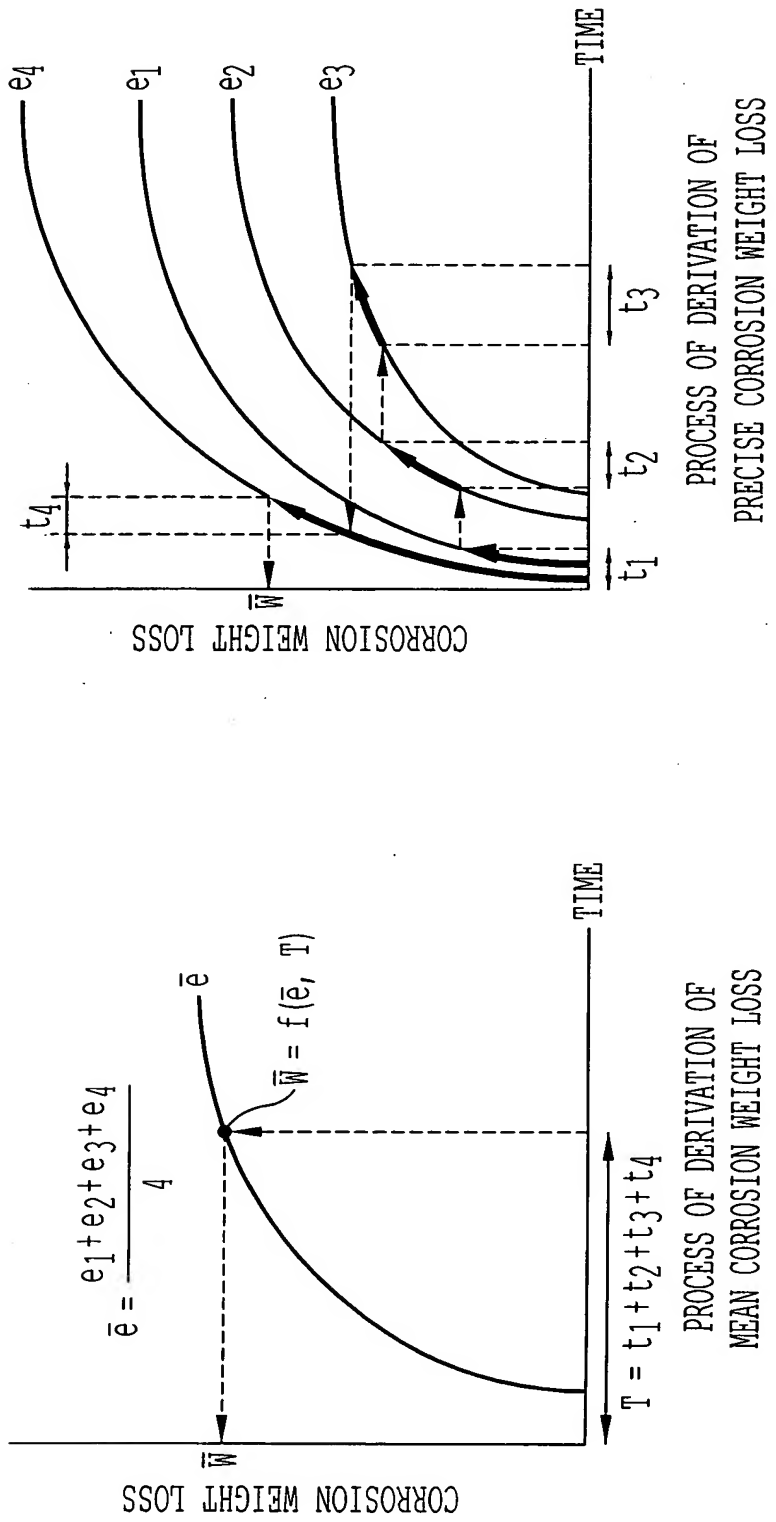


FIG. 15A

FIG. 15B

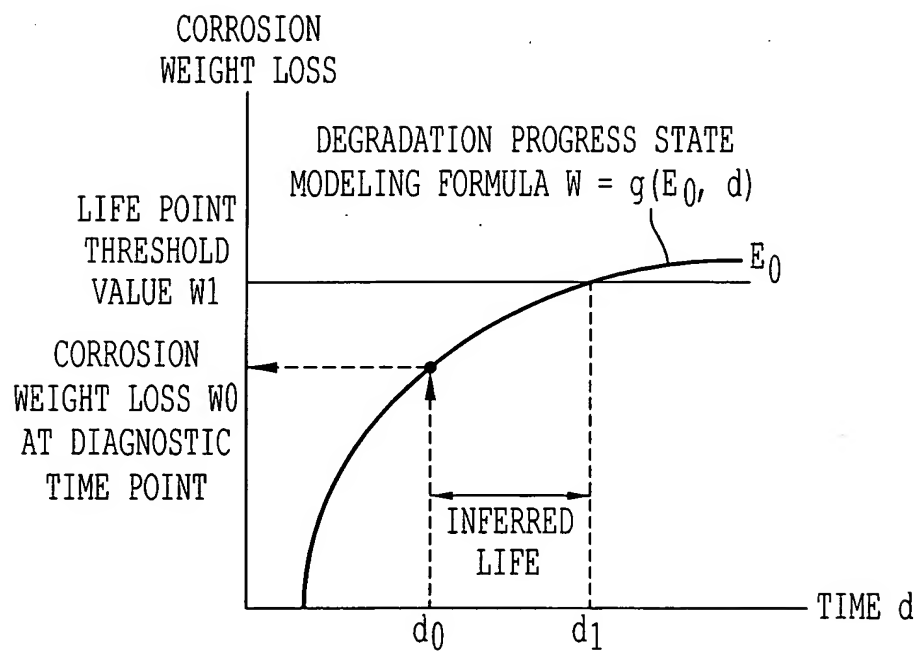
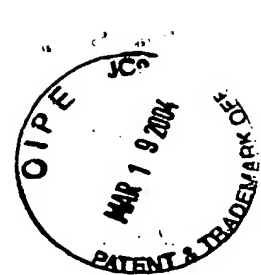
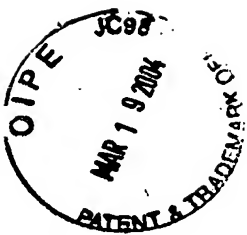


FIG. 16

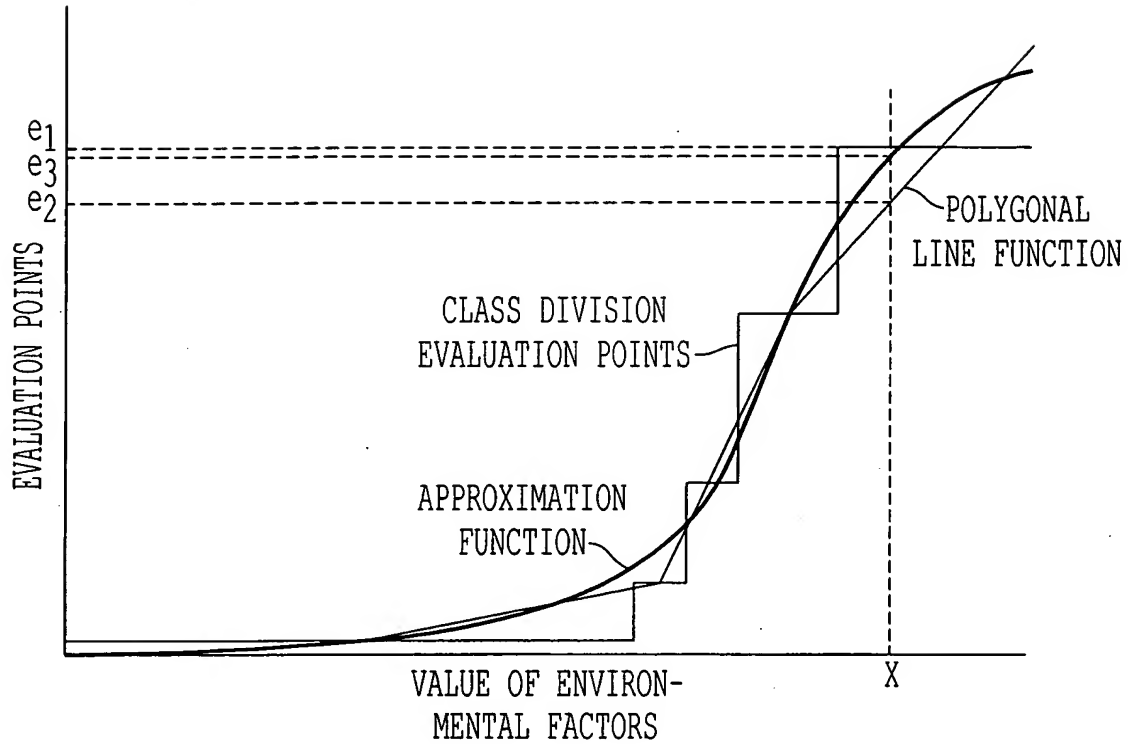
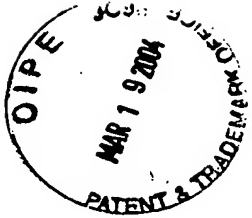


ENVIRONMENTAL EVALUATION POINTS ZONE TABLE 47

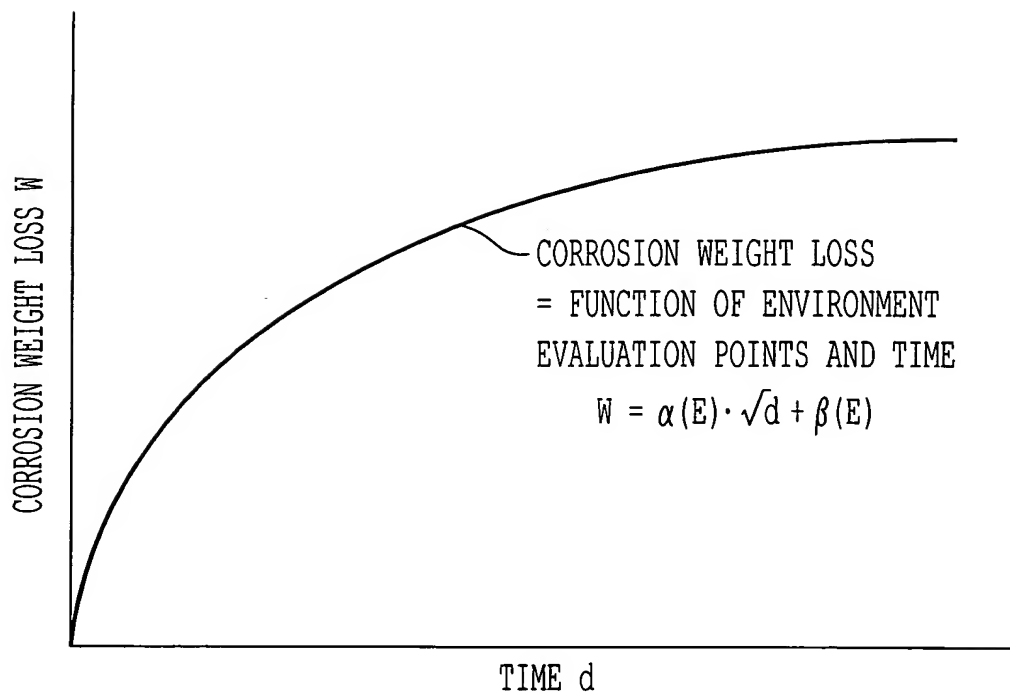
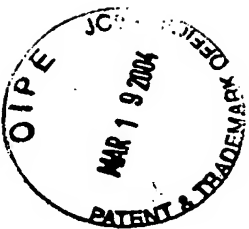
ATMOSPHERIC ENVIRONMENTAL RANGES		I		II		III		IV		V		
		MEASURED VALUES	EVALUATION POINTS	MEASURED VALUES	EVALUATION POINTS	MEASURED VALUES	EVALUATION POINTS	MEASURED VALUES	EVALUATION POINTS	MEASURED VALUES	EVALUATION POINTS	
ENVIRONMENTAL FACTORS	TEMPERATURE (°C)	A	≤ 20	1	≤ 25	2	4	≤ 30	4	≤ 35	8	12
	RELATIVE HUMIDITY (%RH)	B	≤ 60	1	≤ 65	6	12	≤ 70	12	≤ 80	24	36
	CORROSIVE GAS (mdd)	CO2	≤ 0.02	1	≤ 0.05	4	8	≤ 0.2	8	≤ 0.5	16	24
		H2S	≤ 0.02	1	≤ 0.05	6	12	≤ 0.2	12	≤ 0.5	24	36
		NO2	≤ 0.02	1	≤ 0.05	3	6	≤ 0.2	6	≤ 0.5	12	18
		C1	≤ 0.02	1	≤ 0.05	7	14	≤ 0.2	14	≤ 0.5	28	42
		NH3	≤ 0.02	1	≤ 0.1	3	6	≤ 1.0	6	≤ 10	12	18
	SEA SALT PARTICLES	SEA SALT PARTICLES	≤ 0.01	1	≤ 0.03	5	10	≤ 0.1	20	≤ 0.3	30	
	DISTANCE FROM COAST (km)		< 2.0		≤ 1.5		≤ 1.0		≤ 0.5		< 0.5	

FIG. 17

FIG. 17



*FIG. 18*



**FIG. 19**



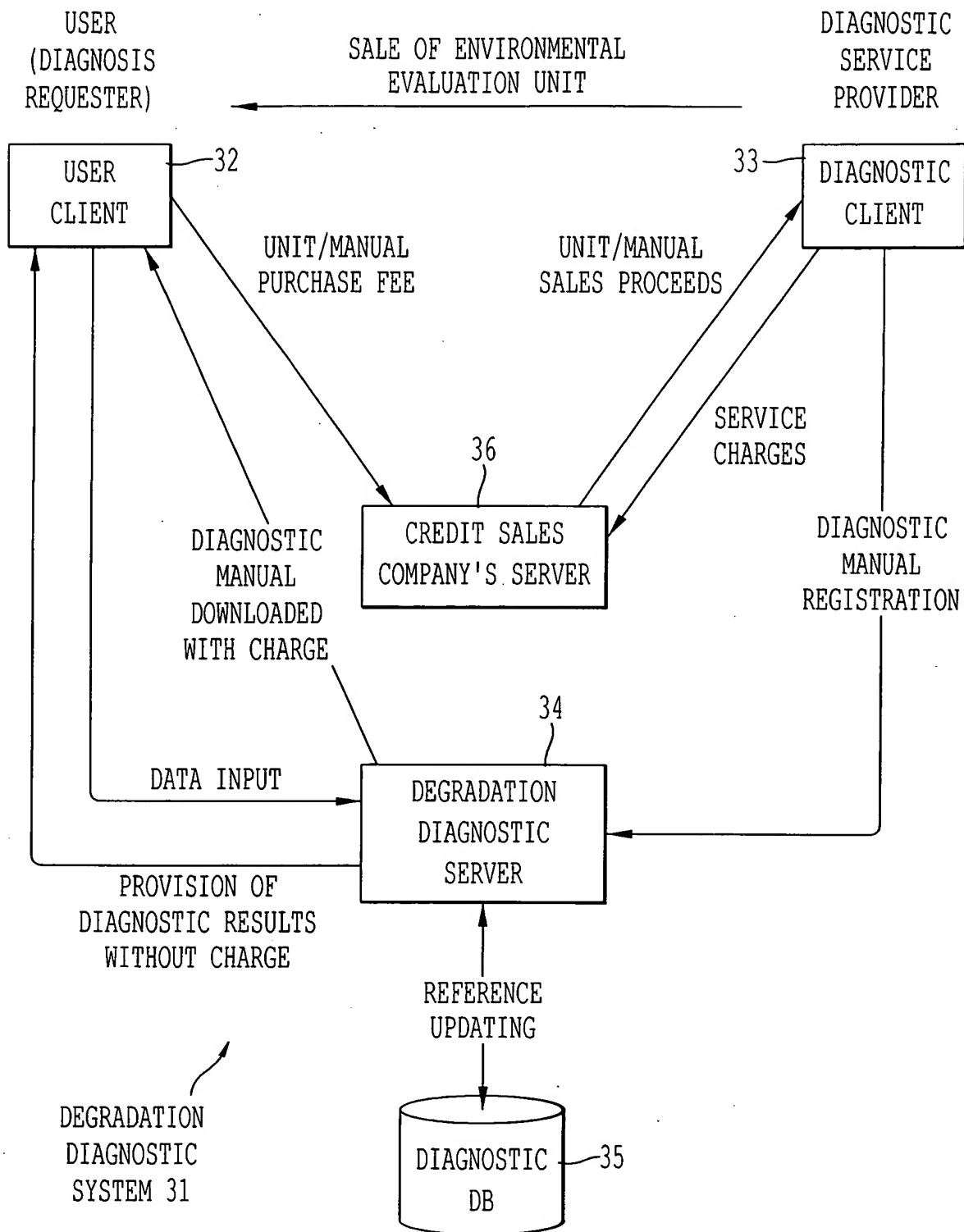
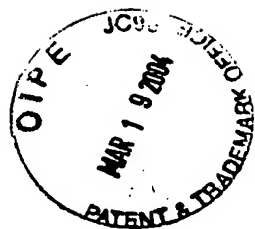


FIG. 20

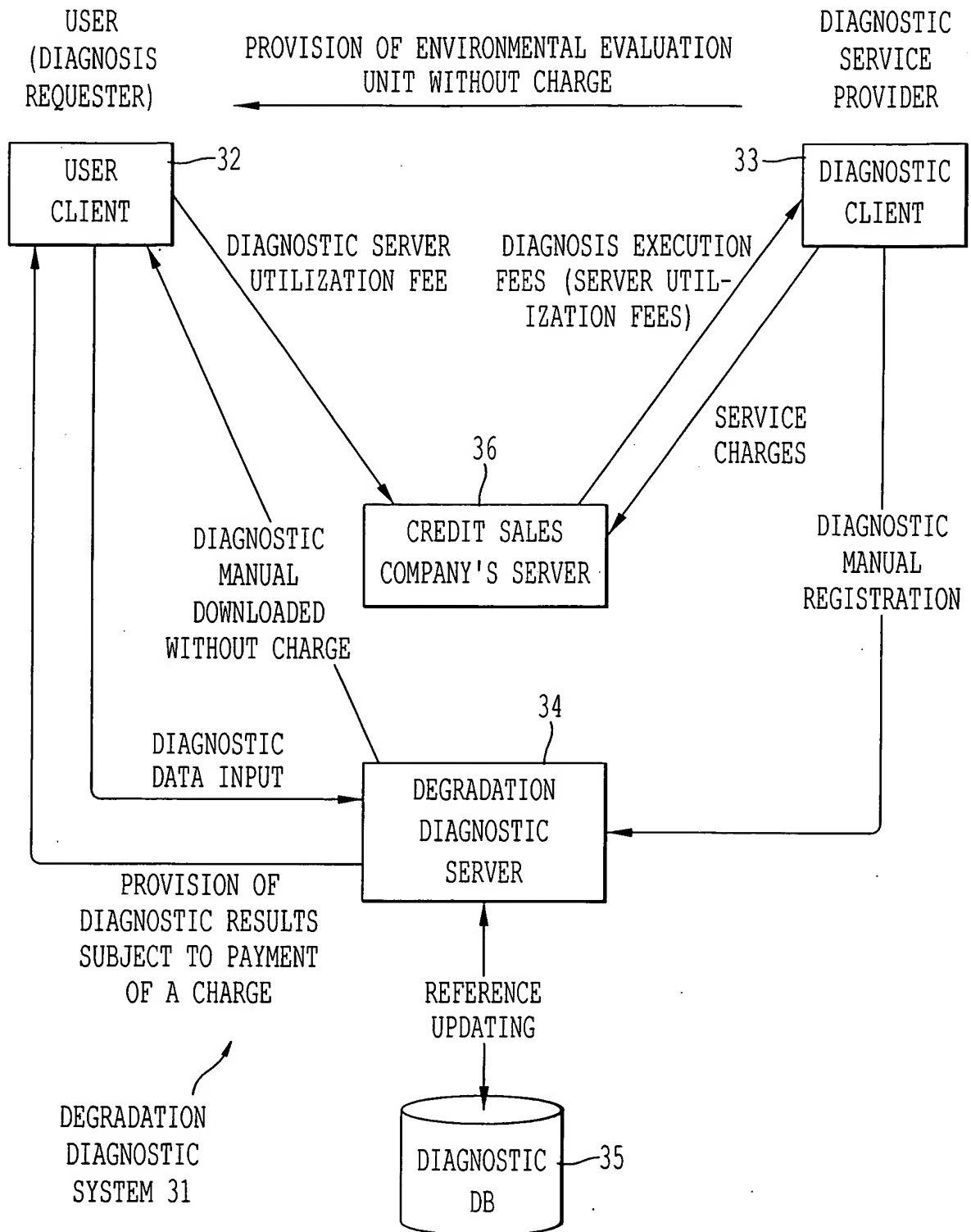
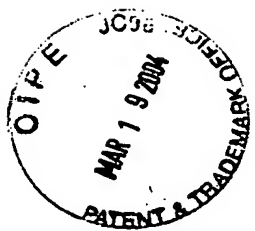


FIG. 21

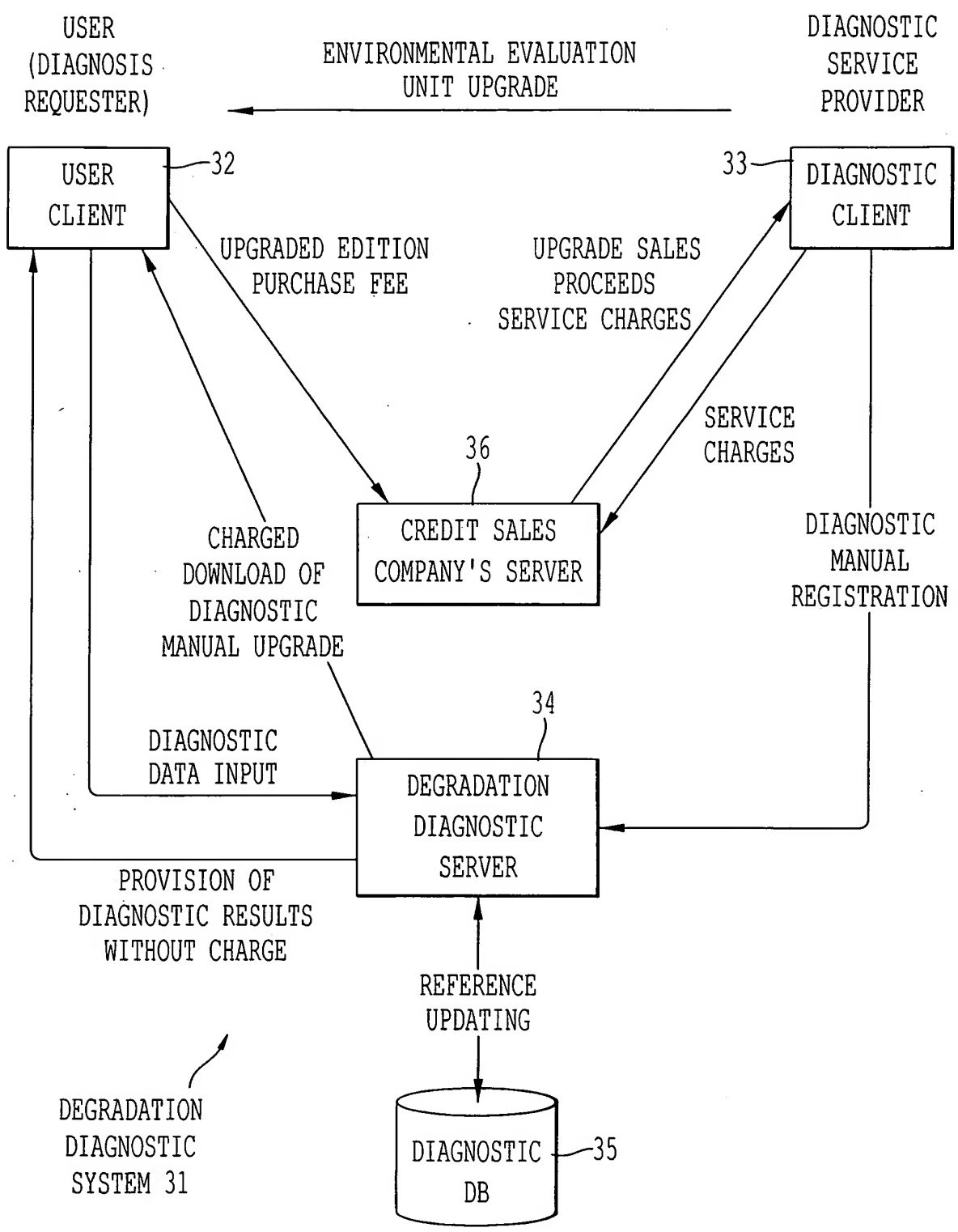


FIG. 22

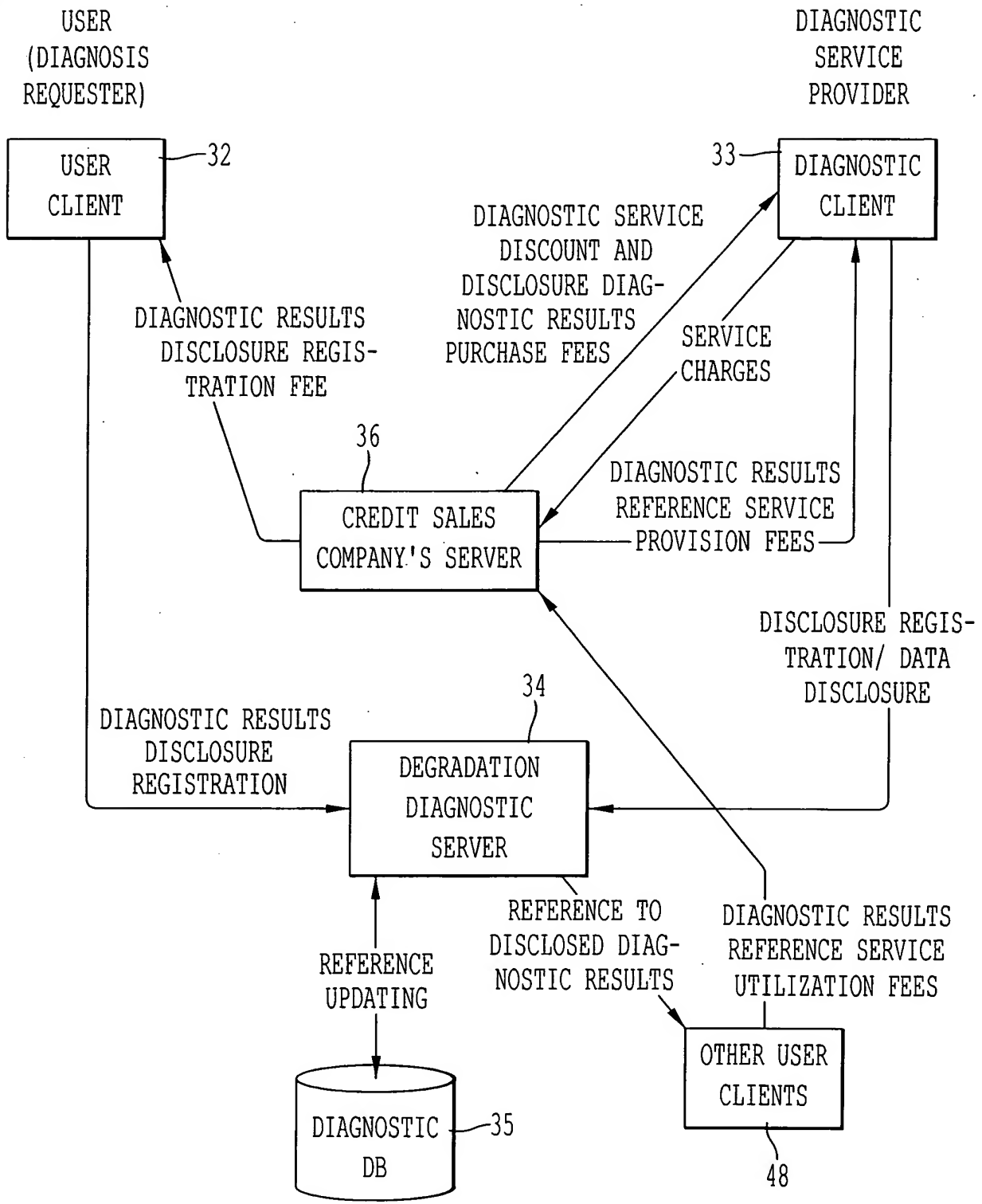


FIG. 23

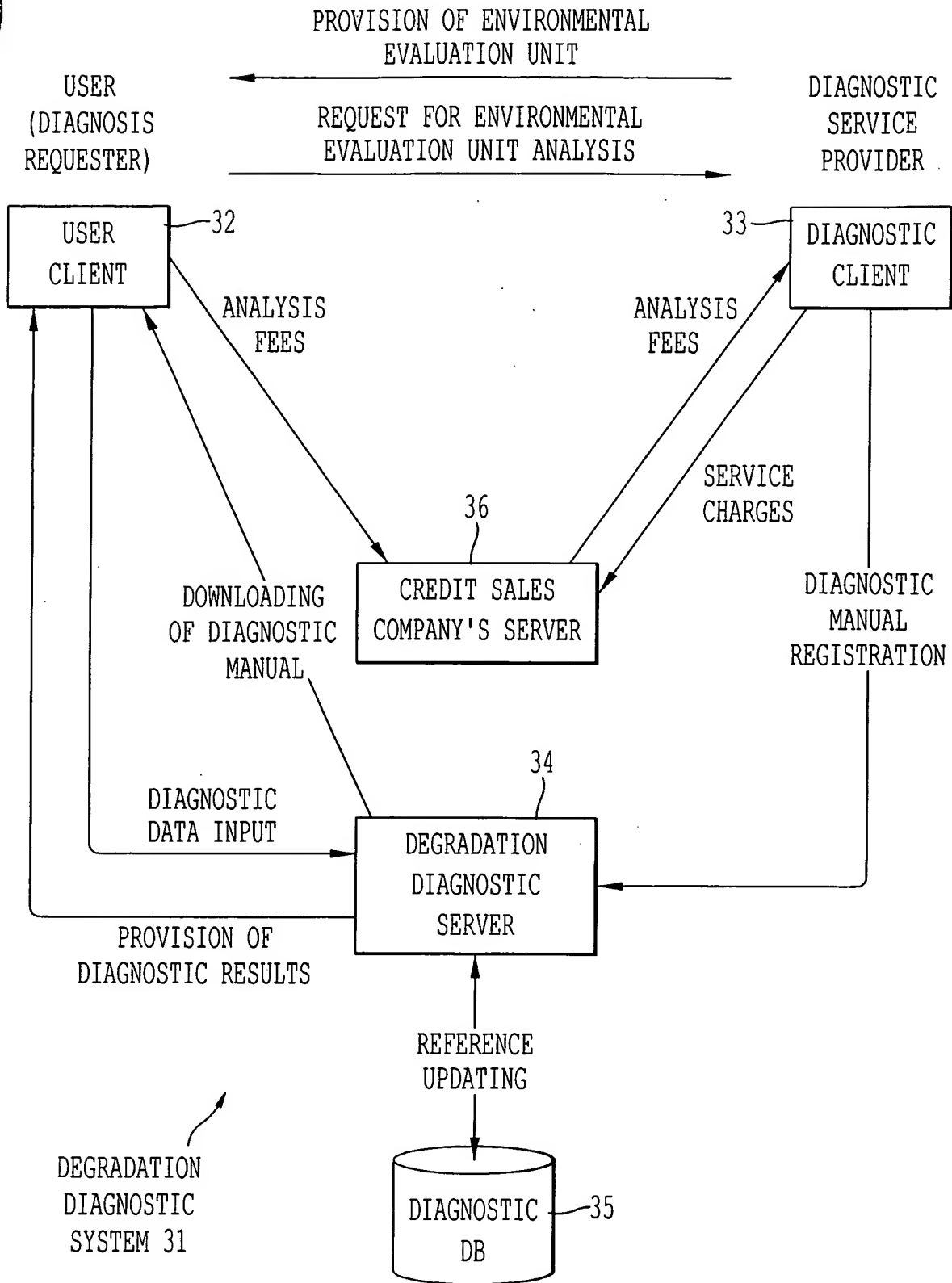
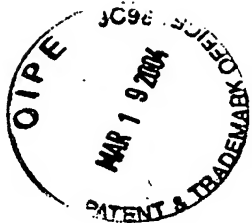


FIG. 24

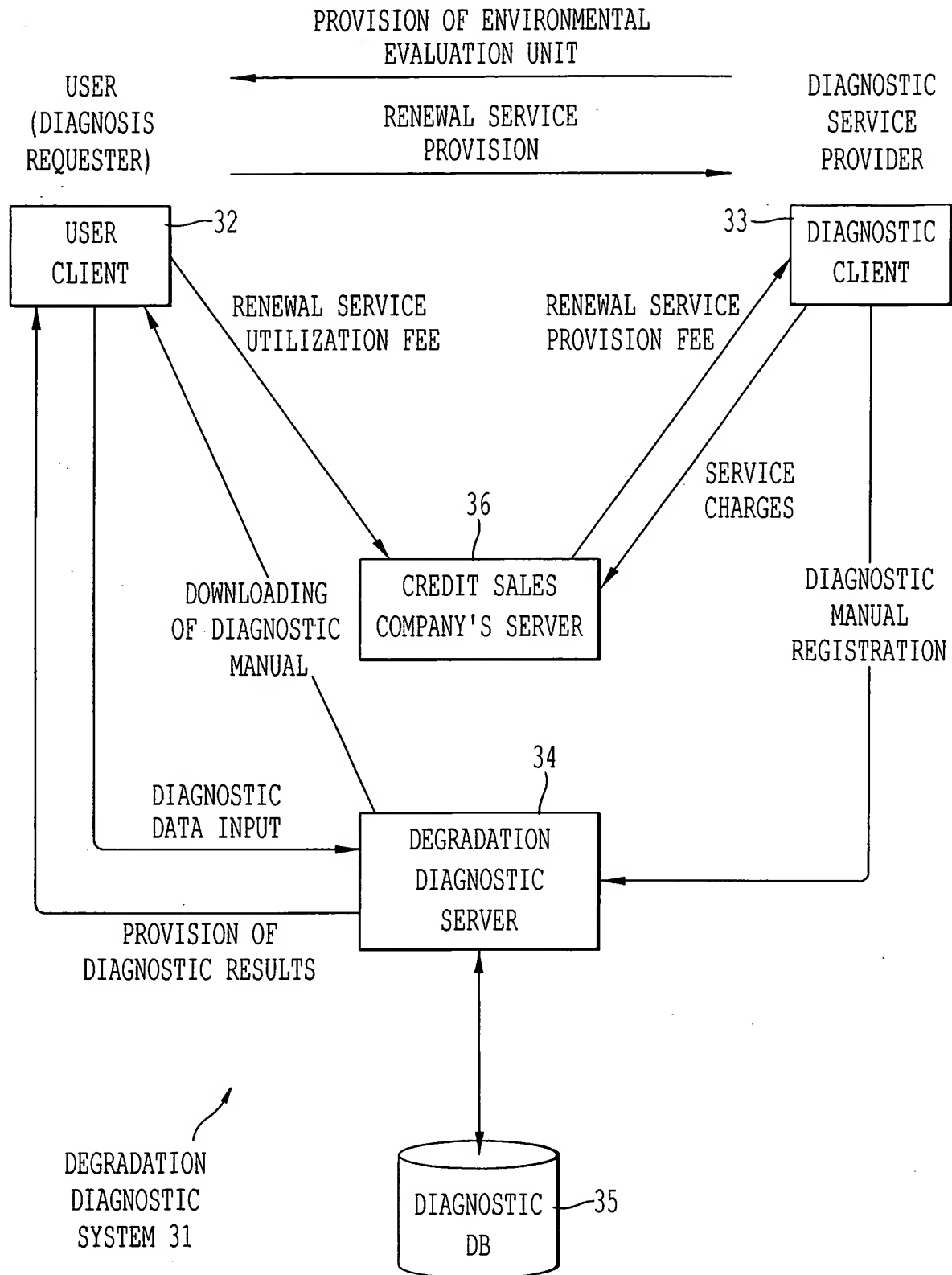
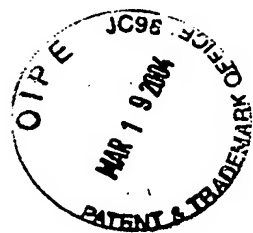


FIG. 25

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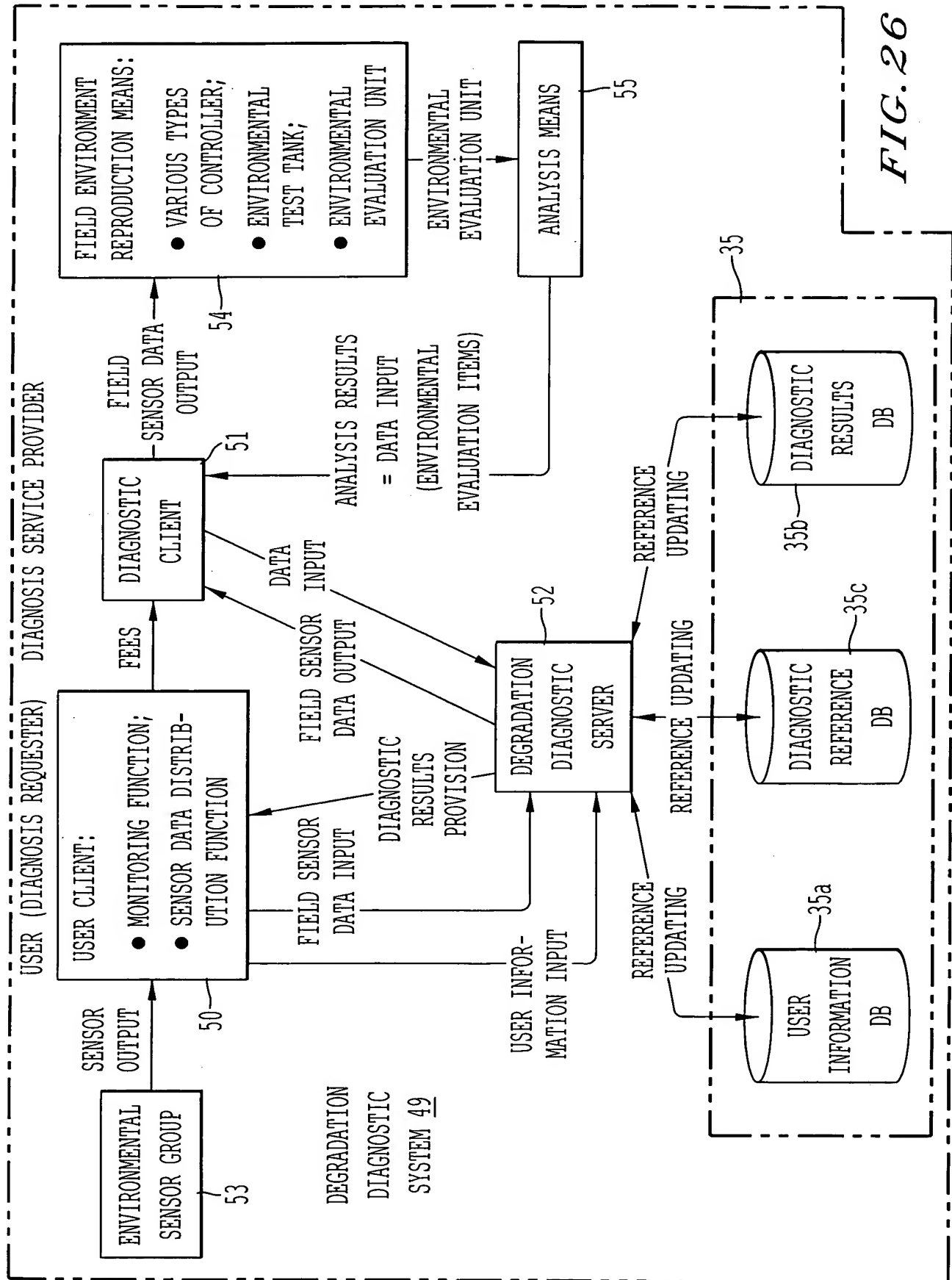


FIG. 26